

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of ~~for~~ designing a circuit board, the method comprising ~~steps of~~:
transmitting a user interface ~~application that requests entry of circuit board design data~~ from a server machine to a client machine via a publicly-accessible global network,
receiving user-supplied circuit board design data via the user interface ~~input into the client machine~~,
retrieving circuit board manufacturing cost data ~~from a manufacturing cost database~~ in response to and associated with the user-supplied circuit board design data from a manufacturing cost database, ~~and~~
determining a per-circuit-board cost using the manufacturing cost data, ~~and~~
updating the user interface ~~application with the per-circuit-board cost on the client machine based on the circuit board manufacturing cost data~~.
2. (Currently Amended) The method of claim 1, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting the user interface ~~application to the a client machine via the a publicly-accessible global network~~ in response to a user-supplied request received by the ~~a server machine via the publicly-accessible global network~~.
3. (Currently Amended) The method of claim 1, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting the user interface application from ~~the a server machine to the a client machine via the Internet~~.
4. (Currently Amended) The method claim 1, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting a manufacturing cost database with the user interface ~~application from the a server machine to the a client machine via the a publicly-accessible global network~~.

5. (Currently Amended) The method of claim 1, wherein ~~the receiving step includes~~ receiving user-supplied circuit board design data comprises receiving the user-supplied circuit board design data via an input device of ~~the~~ a client machine.

6. (Currently Amended) The method of claim 1, wherein ~~the receiving step includes~~ receiving user-supplied circuit board design data comprises receiving the user-supplied circuit board design data via ~~the~~ a publicly-accessible global network.

7. (Currently Amended) The method of claim 1, wherein ~~the retrieving step includes~~ retrieving circuit board manufacturing cost data comprises retrieving the circuit board manufacturing cost data from the manufacturing cost database stored on ~~the~~ a client machine in response to the user-supplied circuit board design data.

8. (Currently Amended) The method of claim 1, wherein ~~the retrieving step includes~~ retrieving circuit board manufacturing cost data comprises retrieving the circuit board manufacturing cost data, via ~~the~~ a publicly-accessible global network, from the manufacturing cost database stored on ~~the~~ a server machine in response to the user-supplied circuit board design data.

9. (Currently Amended) The method of claim 1, wherein ~~the retrieving step includes~~ retrieving circuit board manufacturing cost data comprises retrieving the circuit board manufacturing cost data from ~~the~~ a server machine via ~~the~~ a publicly-accessible global network.

10. (Currently Amended) The method of claim 1, further comprising ~~a step of~~ retrieving circuit board manufacturing capability data from a manufacturing capability database in response to the user-supplied circuit board design data.

11. (Currently Amended) The method of claim 10, further comprising ~~a step of~~ updating the user interface ~~application on the client machine~~ based on the circuit board manufacturing capability data.

12. (Currently Amended) The method of claim 11, wherein updating the user interface ~~application on the client machine~~ based on the circuit board manufacturing capability data ~~includes~~ comprises displaying a traffic light image to a user.

13. (Cancelled)

14. (Currently Amended) The method of claim ~~13~~ 1, wherein ~~the determining step includes~~ determining a per-circuit-board cost comprises determining a per-circuit-board setup cost value and a per-circuit-board run cost value.

15. (Currently Amended) The method of claim 14, wherein determining the per-circuit-board setup cost value and the per-circuit-board run cost value ~~includes~~ comprises determining a per-circuit-board setup cost value and a per-circuit board-run cost value for each work center of a circuit board manufacturing process in response to the user-supplied circuit board design data.

16. (Cancelled)

17. (Original) The method of claim 1, further comprising determining a tooling cost value in response to the user-supplied circuit board design data.

18. (Currently Amended) The method of claim 17, wherein ~~the determining step includes~~ determining a tooling cost value comprises determining the tooling cost value based on the circuit board manufacturing cost data.

19. (Currently Amended) The method of claim 1, further comprising steps of:
determining a selected-portion of the user interface ~~application~~,
retrieving a circuit board design image based on the user selected-portion of the user interface ~~application~~, and
displaying the circuit board design image on the ~~client machine~~ user interface to a user.

20. (Currently Amended) A method of ~~for~~ designing a circuit board, the method comprising steps of:

transmitting a user interface ~~application that requests entry of circuit board design data~~ from a server machine to a client machine via a publicly-accessible global network,

receiving user-supplied circuit board design data via the user interface ~~input into the client machine,~~

retrieving circuit board manufacturing capability data from a manufacturing capability database in response to the user-supplied circuit board design data, and

determining whether the user-supplied circuit board design data exceeds the manufacturing capability of a circuit board manufacturer based on a comparison of the user-supplied circuit board design data and the circuit board manufacturing capability data, and

updating the user interface application on the client machine based on the circuit board manufacturing capability data if user-supplied circuit board design data exceeds the manufacturing capability of the circuit board manufacturer

21. (Currently Amended) The method of claim 20, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting the user interface application to ~~the~~ a client machine via ~~the~~ a publicly-accessible global network in response to a user-supplied request received via the publicly-accessible global network.

22. (Currently Amended) The method of claim 20, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting the user interface application from ~~the~~ a server machine to ~~the~~ a client machine via the Internet.

23. (Currently Amended) The method claim 20, wherein ~~the transmitting step includes transmitting the user interface comprises~~ transmitting the manufacturing capability database with the user interface application from ~~the~~ a server machine to ~~the~~ a client machine via ~~the~~ a publicly-accessible global network.

24. (Currently Amended) The method of claim 20, wherein ~~the receiving step includes receiving user-supplied circuit board design data comprises~~ receiving the user-supplied circuit board design data via an input device of ~~the a~~ client machine.

25. (Currently Amended) The method of claim 20, wherein ~~the receiving step includes receiving user-supplied circuit board design data comprises~~ receiving the user-supplied circuit board design data via ~~the a~~ publicly-accessible global network.

26. (Currently Amended) The method of claim 20, wherein ~~the retrieving step includes retrieving circuit board manufacturing capability data comprises~~ retrieving the circuit board manufacturing capability data from the manufacturing capability database stored on ~~the a~~ client machine in response to the user-supplied circuit board design data.

27. (Currently Amended) The method of claim 20, wherein ~~the retrieving step includes retrieving circuit board manufacturing capability data comprises~~ retrieving the circuit board manufacturing capability data, via ~~the a~~ publicly-accessible global network, from the manufacturing capability database stored on ~~the a~~ server machine based on the user-supplied circuit board design data.

28. (Currently Amended) The method of claim 27, wherein ~~the retrieving step includes retrieving circuit board manufacturing capability data comprises~~ retrieving the circuit board manufacturing capability data from ~~the a~~ server machine via ~~the a~~ publicly-accessible global network.

29. (Currently Amended) The method of claim 20, wherein ~~the updating step includes updating the user interface comprises~~ displaying a traffic light image to a user.

30. (Currently Amended) The method of claim 20, further comprising steps of:
determining a user selected-portion of the user interface application,
retrieving a circuit board design image based on the user selected-portion of the
user interface application, and
displaying the circuit board design image on the ~~client machine~~ user interface to a
user.

31. (Currently amended) A method ~~of~~ for designing a circuit board, the method
comprising steps of:

transmitting a user interface application ~~that requests entry of circuit board design~~
~~data from a server machine to a client machine via a publicly-accessible global network,~~
receiving user-supplied circuit board design data via the user interface input into
the client machine,

retrieving circuit board manufacturing cost data ~~from a manufacturing cost~~
~~database in response to associated with~~ the user-supplied circuit board design data ~~from a~~
manufacturing cost database,

retrieving circuit board manufacturing capability data from a manufacturing
capability database in response to the user-supplied circuit board design data, and

~~updating the user interface application on the client machine based on at least one~~
~~of the circuit board manufacturing cost data and the circuit board manufacturing capability data~~
determining a number of work centers of a circuit board manufacturing process for
manufacturing the circuit board defined by the user-supplied circuit board design data,

determining a per-circuit-board setup cost value and a per-circuit-board run cost
value for each work center,

determining a per-circuit-board cost using the per-circuit-board setup cost value
and the per-circuit-board run cost value for each work center,

determining whether the user-supplied circuit board design data exceeds the
manufacturing capability of a circuit board manufacturer based on a comparison of the
user-supplied circuit board design data and the circuit board manufacturing capability data,
displaying the per-circuit-board cost on the user interface, and

notifying a user of the user interface if the user-supplied circuit board design data exceeds the manufacturing capability of a circuit board manufacturer.

32. (Currently Amended) The method of claim 31, wherein ~~the transmitting-step includes transmitting the user interface comprises~~ transmitting the user interface application to the a client machine via the a publicly-accessible global network in response to a user-supplied request received by ~~the a server machine via the a publicly-accessible global network.~~

33. (Currently Amended) The method of claim 31, wherein ~~the transmitting-step includes transmitting the user interface comprises~~ transmitting the user interface application from the a server machine to the a client machine via the Internet.

34. (Currently Amended) The method claim 31, wherein ~~the transmitting-step includes transmitting the user interface comprises~~ transmitting the manufacturing cost database and a the manufacturing capability database from the a server machine to the a client machine via the a publicly-accessible global network.

35. (Currently Amended) The method of claim 31, wherein ~~the receiving-step includes receiving user-supplied circuit board design data comprises~~ receiving the user-supplied circuit board design data via an input device of the a client machine.

36. (Currently Amended) The method of claim 31, wherein ~~the receiving-step includes receiving user-supplied circuit board design data comprises~~ receiving the user-supplied circuit board design data via the a publicly-accessible global network.

37. (Currently Amended) The method of claim 31, wherein retrieving the circuit board manufacturing cost data ~~includes comprises~~ retrieving circuit board manufacturing cost data from the manufacturing cost database stored on the a client machine in response to the user-supplied circuit board design data.

38. (Currently Amended) The method of claim 31, wherein retrieving circuit board manufacturing cost data ~~includes~~ comprises retrieving the circuit board manufacturing cost data from a the manufacturing cost database stored on ~~the a~~ server machine in response to the user-supplied circuit board design data.

39. (Currently Amended) The method of claim 31, wherein retrieving circuit board manufacturing cost data ~~includes~~ comprises retrieving the circuit board manufacturing cost data from the manufacturing cost database via ~~the a~~ publicly-accessible global network

40. (Currently Amended) The method of claim 31, wherein retrieving circuit board manufacturing capability data ~~includes~~ comprises retrieving the circuit board manufacturing capability data from the manufacturing capability database stored on ~~the a~~ client machine in response to the user-supplied circuit board design data.

41. (Currently Amended) The method of claim 31, wherein retrieving circuit board manufacturing capability data ~~includes~~ comprises retrieving the circuit board manufacturing capability data from the manufacturing capability database stored on ~~the a~~ server machine in response to the user-supplied circuit board design data.

42. (Currently Amended) The method of claim 31, wherein retrieving circuit board manufacturing capability data ~~includes~~ comprises retrieving the circuit board manufacturing capability data from the manufacturing capability database via ~~the a~~ publicly-accessible global network

43. (Currently Amended) The method of claim 31, wherein ~~updating the user-interface application on the client machine~~ includes notifying a user of the user interface ~~comprises~~ displaying a traffic light image to a user.

44-47. (Cancelled)

48. (Currently Amended) The method of claim 31, further comprising determining a tooling cost value ~~in response to~~ based on the user-supplied circuit board design data.

49. (Currently Amended) The method of claim 48, wherein ~~the determining step includes~~ determining a tooling cost value comprises determining the tooling cost value based on the circuit board manufacturing cost data.

50. (Currently Amended) An article comprising a computer-readable signal-bearing medium having therein a plurality of instructions which, when executed by a processor, cause the processor to:

display a user interface ~~application~~ that requests entry of circuit board design data to a user ~~of a client machine,~~

retrieve circuit board manufacturing cost data associated with circuit board design data supplied by the user via the user interface from a manufacturing cost database ~~in response to user-supplied circuit board design data input into the client machine,~~

retrieve circuit board manufacturing capability data from a manufacturing capability database in response to the ~~user-supplied~~ circuit board design data, and

determine a per-circuit-board cost using the circuit board manufacturing cost data;
determine whether the circuit board design data exceeds the manufacturing capability of a circuit board manufacturer based on a comparison of the circuit board design data and the circuit board manufacturing capability data,

display the per-circuit-board cost on the user interface, and
notify the user if the circuit board design data exceeds the manufacturing capability of a circuit board manufacturer

update the user interface application on the client machine based on at least one of the circuit board manufacturing cost data and the manufacturing capability data.

51. (Currently Amended) The article of claim 50, wherein ~~the plurality of instructions, when executed by the processor, further cause the processor to~~ retrieve the circuit

board manufacturing cost data comprises to retrieve the circuit board manufacturing cost data from the manufacturing cost database via a publicly-accessible global network.

52. (Currently Amended) The article of claim 50, ~~wherein the plurality of instructions, when executed by the processor, further cause the processor to~~ retrieve the circuit board manufacturing capability data comprises to retrieve the circuit board manufacturing capability data from the manufacturing capability database via the publicly-accessible global network.